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Remarks

In the specification, paragraphs have been amended and deleted to correct typographical errors. No new matter has been added.

In the drawings, an omitted reference numeral has been added.

Claims 1-15 are pending in the application. Claims 1-3, 7-11, and 15 have been amended herein. Claims 16 through 19 have been added. Claims 4-6, and 12-14 have been cancelled. Favorable reconsideration of the application, as amended, is respectfully requested.

I. OBJECTION TO CLAIMS

Claim 11 is objected to because it depends from itself. The typographical error has been corrected.

II. REJECTION OF CLAIMS UNDER 35 USC 102.

Claims 1-18 stand rejected under 35 USC 102(e) as being anticipated by US Patent 6,058,380 to Anderson et al.

General Discussion

In general, the applicant's invention relates to an automated invoice management system operating in conjunction with a plurality of vendor client systems and a plurality of payer client systems. The invoice management system receives a plurality of vendor electronic invoice transactions from a plurality of vendors. Each vendor electronic invoice transaction has a transaction definition (e.g. format and syntax) compatible with the vendors accounts receivables system and uses business data values compatible with the vendors accounts receivables system. The electronic

invoices transactions are aggregated for each payer and delivered to each payer as part of an invoice file. – each payer electronic invoice has a transaction definition compatible with the payers accounts payables system and uses business data values compatible with the payers accounts payables system.

The present invention recognizes that when transferring an electronic invoice transaction from a vendor to a customer not only must data mapping translation be performed to translate the transaction definition (e.g. format and syntax) of the electronic invoice transaction, but business value translation must also occur.

Data mapping translation includes mapping or repositioning data from a field in the received transaction to a field in the translated transaction. The repositioning may include separating data from one field to multiple fields or combining data from multiple fields into one field. Fore example, a field containing a data in the format of MMDDYYYY may be separated and mapped to multiple date fields such as MM field, a DD field, and a YYYY field. Similarly in reverse, data from multiple fields may map to a single field.

Further, the data mapping translation may include truncating a value or adding default characters to a value to assure that the value meets the format or syntax requirements of the field to which it is being mapped. For example, when a 4-digit year value maps to a 2-digit year field, the first two digits (e.g. 19, or 20) are truncated.

In summary, data mapping translation repositions a data value and may even require changing the format or syntax of a data value (e.g. truncating or default characters), but it does not change the substantive value of the data value.

In contrast, business value translation involves substituting the substantive value of a data value for a different substantive value. For example, a database of one vendor may identify a particular customer by a customer number value of “C-001” while another database system of another vendor may identify the same customer by a customer number value of “CSN57A” (See P11,L29 to P12,L2). Each different substantive value represents the same customer, but they are from distinct value sets.

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Neither can be derived from the other by repositioning the data, adding default characters, truncating characters, or using other logic algorithms. Look up and substitution is required.

The ability of the automated invoice management system (which operates as an intermediary between multiple vendors and multiple customers) to perform business value translation is useful in that it eliminates the need of each vendor and each customer to agree on use of a single global value set for business values and it eliminates the need for each vendor and each customer to develop its own proprietary system for converting between its database value sets and the global value sets.

The Anderson et al. system is a system for automating a customer's invoice approval process. More specifically, the Anderson et al. system receives invoices on behalf of a customer and using vendor specific rules evaluates whether the invoice is reasonable.

In implementation, Anderson et al. discloses a system which performs repositioning of data to translate the format and syntax of electronic invoice transactions. The Anderson et al. system receives an invoice in a vendor specific format, translates it to a flat file format, and stores the flat file format. Periodically the customer can elect to have an AP update file generated and an AP formatter translates each invoice into an account specific format that is compatible with the customer accounting system.

While the Anderson et al. system communicates with the customer using an account specific format, translation between the flat file format and the account specific format involves data mapping translation (e.g. repositioning). Anderson et al. does not disclose business value translation (e.g. look-up and substitution). In fact, Anderson et al. specifically discloses the use of global customer information (C13,L46 to C13,L67) which avoids any need for business value translation.

Claims 1-3, 7-11, and 15 have been amended, and new claims 16-19 have been added to more precisely point out the distinguishing features of the applicants invention.

Claim 1

Independent claim 1, as amended is directed to an automated invoice management system (16) for operation with a plurality of client systems (24) including a plurality of vendor client systems (24v) and at least one payer client system (24p).

The automated invoice management system (16) comprises a network circuit (42), a session management engine (46), and a translation engine (48).

The session management engine is coupled to the network circuit and provides for establishing a secure session with each client system, receiving a first vendor invoice transaction from a first vendor client system, and providing an export invoice transaction to a payer client system (P5,L19 - P5,L26).

The first vendor invoice transaction is compliant with a first vendor client transaction definition and includes vendor recognized business values - including a vendor recognized payer ID code and a vendor recognized vendor ID code - and an amount due from a customer associated with the payer client system (P5,L23 – P5,L26) and (P11,L19 – P12,L2).

Similarly, the export invoice transaction provided to the payer client system is compliant with a payer client transaction definition and includes payer recognized business values - including a payer recognized payer ID code and a payer recognized vendor ID code - and the amount due from the customer (P5,L23 – P5,L26) and (P11,L19 – P12,L2).

The translation engine performs data mapping translation to translate the first vendor invoice transaction from the vendor invoice transaction definition to a normalized invoice transaction definition and performs business value translation to translate vendor recognized business values to normalized business values (P7,L1 to P7,L13) and (P19,L27 – P21,L2).

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The translation engine further performs data mapping translation to translate the ~~normalized invoice transaction from the normalized invoice transaction definition to the~~ payer client transaction definition and performs business value translation to translate normalized business values to payer recognized business values (P21,L5 – P21,L26).

Claim 11

Independent claim 11 is a method claim corresponding to apparatus claim 1. The discussion set forth above with respect to claim 1 applies to Claim 11.

Neither Anderson et al., nor the other art of record, alone or in combination each element of the independent claims 1 and 11 (or new independent claim 16). Further, the dependent claims 2-3, 7-10, 15, and 17-19 each depend from one of claims 1, 11, or 16 and are therefore distinguishable over Anderson et al. and the other art of record for at least the same reasons. Further, the limitations set forth in the dependent claims further distinguish the applicant's invention over Anderson et al. and the other art of record.

III. CONCLUSION.

In view of the amendments made herein, claims 1-3, 7-11, 15, and 16-19 are believed to be allowable and the application is believed to be in condition for allowance. A prompt action to such end is earnestly solicited.

Should the examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should a petition for an extension of time be necessary for the timely reply to the outstanding Office Action or should additional claim fees be necessary, the Commission is authorized to charge any fees to Deposit Account No 105825.

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Respectfully-submitted,

A handwritten signature in black ink, appearing to read "Tim O'Hagan", is written over a horizontal line.

Timothy P. O'Hagan
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DATE: 6-7-04

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Remittance Detail Table



Column Name	Type and Maximum Length
Normalized Invoice Transaction Number	Auto-increment
Client Code of Payor	Char 8 (K)
Payor Assigned Payment Number	Char 50 (K)
Payor Recognized Vendor ID	Char 50
Client Code of Vendor	Char 8
Vendor Assigned Invoice Number	Char 50 (K)
Invoice Date	Date (K)
Gross Invoice Amount	999999999999.99
Total Discount	999999999999.99
Invoice Amount Paid	999999999999.99

Figure 3e